

October 28, 2022

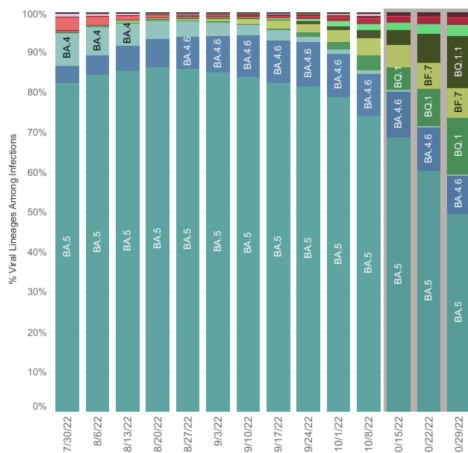
## KEY TAKEAWAYS

- Case rates and hospitalizations across the Commonwealth remain low. But early signs suggest that Virginia may be headed into a period of new growth.
- Confirmed cases are down slightly from last week. The statewide effective reproduction number ( $R_e$ ) continues to hover just below one at 0.890. This is down 0.033 from last week. No region in the Commonwealth has an  $R_e > 1.0$ , but several are close. This suggests that cases have plateaued, but not yet begun to grow.
- Most health districts are still in declining or plateaued case trajectories. Ten are now in growth trajectories with two in surge. A total of 36 counties and cities are now at "Medium" community levels. Two are now reporting "High" community levels. In these locales, masking is recommended in indoor public places.
- BA.5 is no longer responsible for the majority of cases in Virginia. The newly introduced variants BF.7, BQ.1 and BQ.1.1 now account for an estimated 35% of new cases. These variants can escape prior immunity. They also have significant growth advantages over BA.5. They will likely out-compete it within a few weeks. BA.2.75.2 remains rare, and XBB cases have not been detected in significant numbers.
- Modeling continues to suggest the possibility of another major winter surge. Bivalent boosters remain our best bet to limit the impact of this surge. They are now available for all five and older. **Please consider getting yours as soon as possible.**

**670,483**Total Bivalent Booster Doses  
Administered by Oct. 27, 2022**12.6%**Of eligible Virginians have  
received a Bivalent Booster**11.8 per 100k**Average Daily Cases  
Week Ending Oct. 24, 2022**Two**Virginia Localities at  
**High** CDC Community Levels  
as of October 27, 2022

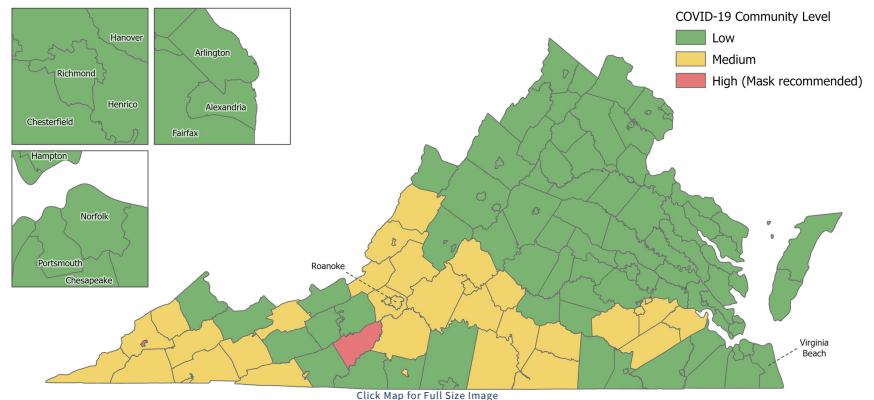
## KEY FIGURES

## Variant Mix – HHS Region 3



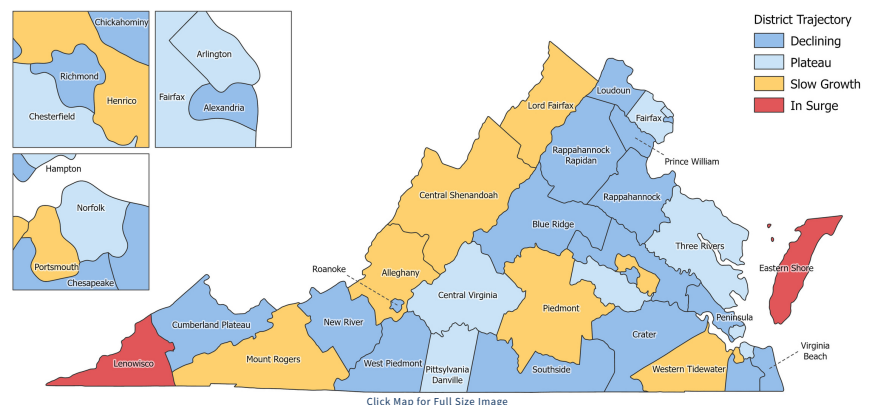
## CDC Community Levels

As of October 27, 2022



## Growth Trajectories: Two Health Districts in Surge

Status	# Districts (prev week)
Declining	17 (25)
Plateau	8 (5)
Slow Growth	8 (5)
In Surge	2 (0)



## THE MODEL

The UVA COVID-19 Model and weekly results are provided by the UVA Biocomplexity Institute, which has over 20 years of experience crafting and analyzing infectious disease models. It is a health district-level **S**usceptible, **E**xposed, **I**nfectious, **R**ecovered (SEIR) model designed to evaluate policy options and provide projections of future cases based on the current course of the pandemic. The Institute is also able to model alternative scenarios to estimate the impact of changing health behaviors and state policy.

**COVID-19 is a novel virus,  
and the variant mix  
changes periodically.  
These models improve  
as we learn more.**

## THE SCENARIOS

**Unchanged:** The model uses scenarios to explore the potential paths the pandemic may take under future conditions. Model projections take a variety of factors into account, including current variants, vaccine uptake, vaccination/boosting rates, previous infection, waning immunity, weather, and behavioral responses. All models now account for bivalent boosters. Unless otherwise specified, they assume that booster administrations will continue at the current pace. The **"Adaptive"** scenario represents the current course of the pandemic, projecting it forward with no major changes. The **"VariantX"** modifier explores the potential impact of a new variant. This hypothetical variant is imagined as having the same immune escape and transmissibility advantages over BA.4/5 that BA.4/5 did over the earlier BA.2. See [page three of the July 15 report](#) for details. The **"FallWinter"** modifier layers seasonal increases associated with colder weather, holiday gatherings, and travel, on top of the base scenarios. It does this by artificially adjusting transmissibility between September and January to match transmissibility from the same time last year. The new **"OptBooster"** (optimistic) modifier assumes that bivalent booster coverage will increase *beyond* the current pace and be 25% higher than 3rd dose boosters from Fall of 2021. The new **"PessBooster"** (pessimistic) modifier assumes administrations will *slow down*, and be 25% lower than 3rd dose boosters.

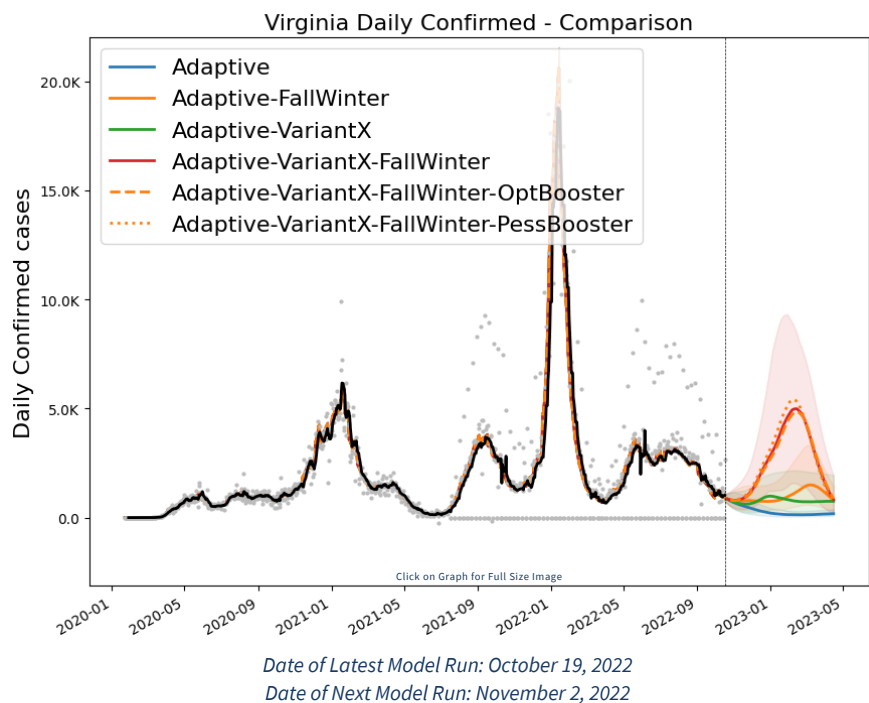
## MODEL RESULTS

**Unchanged:** As always, the current course **"Adaptive"** scenario is shown in blue. This scenario projects a continued decline of cases. In this scenario, Virginia will fall below 500 daily cases by mid-November.

Both the **"Adaptive-FallWinter"** (orange) and **"Adaptive-VariantX"** (shown in green) scenarios project mild surges. The former peaks at 1,500 daily cases in early March, the latter at 1,000 daily cases in early January.

The **"Adaptive-VariantX-FallWinter"** (red) combines both a hypothetical new variant with the seasonal forcing of Fall / Winter. The combination allows for a significant surge, peaking at about 5,000 daily cases in early February, before quickly declining.

Both the **"OptBooster"** and **"PessBooster"** scenarios (dashed orange lines) are applied to the VariantX-FallWinter scenario. They show that increasing booster uptake could prevent over 10,000 cases. If booster rates slow, this could cause an extra 25,000 cases.



**Please note:** The data and projections shown here reflect reported cases. During the Omicron wave, testing shortages resulted in far fewer infections being reported as cases. This suggests fewer total infections than experienced in January. Please see [page three of the May 13th modeling report](#) for more details.

[\(Explore the model results in detail on this dashboard\)](#)